

### Abstract

A novel multicomponent oxidation catalyst that can be effectively used in, for example, an epoxidation reaction of olefins, etc., being inexpensive and high in versatility and 5 that exhibits high catalytic activity; and a process for producing an epoxy compound through hydrogen peroxide oxidation of an olefin with the use of the multicomponent oxidation catalyst. There is provided a multicomponent oxidation catalyst comprising a tungsten compound, a quaternary ammonium salt, any 10 of phosphoric acids and/or boric acids and a hydrogen sulfate salt. Further, there is provided a process for producing an epoxy compound, characterized in that an olefin is oxidized with hydrogen peroxide in the presence of the above multicomponent oxidation catalyst. The epoxy compound obtained by this process 15 is useful as an intermediate of agricultural chemicals, medicines or the like, a raw material of various polymers, etc.